

Winter Weather Vehicle Operations

This material is intended for a rapid review of winter storm activities related to apparatus and may not be comprehensive.

Additional resources are available through Fleet Services and Driver Training.





Preparation

- Know your apparatus before the storm
 - Climate controls and mirror heaters
 - Refresh apparatus systems
 - all-wheel drive
 - automatic chains
 - inter-axle locks
 - differential locks
 - automatic traction control.
 - Typical handling characteristics – talk to experienced people about the vehicle
- Clean the windows, clear the defroster, top off the washer fluid
- Put a snow shovel, ice melt, and ice scraper on the unit
 - The shovel will be handy on responses to clear walkways too
- Personal
 - Stay hydrated and nourished
 - Keep spare clothes, spare gloves, good footwear

Preparation – Snow Chains

- Know the various options for snow chains and their installation methods
 - Automatic (On-Spot) – flip a switch
 - Standard – install by hand
- Assemble a field repair kit to manage broken chains while on the road and put it on the apparatus
- Educational videos:
 - On-spot chain operation:
<https://www.youtube.com/watch?v=3YcDrsYJfug>
 - Preparing to install chains:
https://www.youtube.com/watch?v=YfDmNCkzbpg&ab_channel=Camas-WashougalFireDepartment
 - Installing chains:
<https://www.youtube.com/watch?v=jGOVHrwTjD0>
 - Repairing chains:
https://www.youtube.com/watch?v=aZX7bG2B7hY&ab_channel=adsc2006
- Listen for loose chains during travel – stop in a safe spot as soon as a loose chain is detected





Road Conditions

- Ice usually follows snow in the DC region
 - Chains only marginally assist in ice
 - Ice may not be readily visible – “black ice”
 - Wet roads in the daytime may be icy roads at night
- Apparatus will slide after parking
 - Use wheel chocks on the downhill side
 - Turn tires into or against a curb
 - If the street is all ice, do the road shoulders offer any traction?
- Avoid snow plow rows or piles
 - Snow below the undercarriage can lift up on the vehicle and reduce traction
 - Frozen piles are like icebergs – they will do damage



Getting Stuck

- Assess your situation and provide a Conditions-Actions-Needs report to PSCC or Incident Command via radio; do other units need to find another route?
- Back out or alternate forward and backward movement to try and “rock” the vehicle to better traction
- Use integral vehicle systems to assist with traction, i.e. differential locks, disable traction control, inter-axle locks
- Stop, get out, and shovel under and around the apparatus
- If the vehicle is equipped with standard tire chains avoid repeatedly and rapidly spinning the tires; this will destroy the chains
- If the vehicle is equipped with automatic tire chains spinning the tires is required to put the chains below the tires
- Remain patient and assess the need for assistance based upon the situation; frustration leads to poor decisions



Personnel Safety

- Improve visibility of personnel using high-visibility attire
- Oncoming vehicles may see personnel, however may not be able to stop
 - Even skilled and attentive drivers may not be able to avoid you!
- Operate in the shadow of apparatus or use other natural barriers to separate personnel from traffic
- Maintain three points of contact mounting and dismounting apparatus – move methodically

Cold Weather Precautions

Pumps

- Leave the pump wet unless **all** of the water can be removed (blown out)
- If the pump is dry, close drains and valves prior to leaving the station to avoid freezing in the open position
- Place the pump in gear while sitting on the scene of every incident.
- Place the pump in gear every time the engine returns to the station to confirm that the pump is operational.
- Keep charged hose lines cracked open to keep water moving.
- Check for ice build-up on all discharges between the valve and the cap.



Frozen discharges on a Crimson Engine



Cold Weather Precautions

- Leave all apparatus parked inside as much as possible.
- Ensure all aerial waterways are fully drained and leave drains and valves open.
- Drain all air tanks to release moisture.
- Consider not washing apparatus during extreme cold to avoid freezing cab doors, compartment doors, hose loads, and other components.



Additional Resources

- [FCGO #12-01](#) – Winter Driving and the Use of Vehicle Snow Chains
- [Winter Weather Driving](#) – MCFRS Engine Driver Training Supplement
- Did You Know bulletins
 - [Winter Weather Driving](#)
 - [Traction Assistance Systems](#)
 - [Snow Chains](#)